

Remarks/Arguments

Claims 1, 4-14, 16-23, 26-34 and 36-49 are pending in the application. Claims 46-49 are cancelled. Claims 5, 18, 20, 21, 27, 38, and 41 have been amended for clarification purposes only. In each of these claims, the whole numbers included in the original claim were amended by adding a decimal point and a zero to indicate the numbers are rounded to the nearest tenth. For example, the whole number, 6, was amended to read 6.0. The amendments add no new matter and numbers rounded to the nearest tenth were used in the Examples.

Applicant wishes to thank Examiner Hwu for the courtesies extended to Charles Laff and Tambyn VanHeyningen in a telephone interview on February 1, 2007. The arguments made in the interview are presented below in response to the appropriate rejections.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 5, 18, 20, 21, 27, 38, and 41 were rejected as indefinite due to inclusion of the word "about." In the Office action, the Examiner asserted that the specification does not specifically point out the exact percentage of galactose-containing sugar. Applicant noted in the last response and respectfully submits that relative terms, such as the term "about," are permissible both in the claims and the specification. MPEP §2173.05(b). The key is to determine whether one of ordinary skill in the art, in view of the prior art and the specification, would be reasonably apprised of the scope of the invention. To further clarify the scope of the invention, Applicant has amended each of the claims containing the term "about" by adding a decimal point and a zero after the whole numbers included in the claim. One of skill in the art reading a claim requiring "more than about 1.0%" galactose-containing sugar such as in

amended claim 18 or “between about 1.0% and about 6.0%” galactose-containing sugar such as in amended claim 21 would not normally read these claims as encompassing a medium comprising 0.5% galactose-containing sugar, because such a reading would encompass a 50% reduction in the amount of galactose-containing sugar.

In the telephone interview, Examiner Hwu further explained the rejection and specifically pointed out that claims reciting ‘at least about’ were not allowable where there was close prior art and there was nothing in the specification, prosecution history, or the prior art to provide any indication as to what range is covered by the term ‘about.’ MPEP § 2173.05 (b). As explained above, the specification supports the claims as now amended and avoids indefiniteness. As explained below, no prior art reference teaches use of a combination of a galactose-containing sugar and an additional sugar for reproducing coniferous somatic embryos. Therefore, use of the term “about” is permissible and Applicant respectfully submits the rejection should be withdrawn.

Rejections under 35 U.S.C. § 102(b)

Claims 1, 5-8, 12, 16-23, 27, 28, 32, and 36-45 were rejected as anticipated by von Arnold. The Examiner asserts that von Arnold discloses formation of embryogenic callus on medium containing a combination of sucrose and galactose. The Examiner points to two passages of von Arnold for support. First, on page 234, the von Arnold reference states: “Unless stated otherwise, half strength basal medium containing 30mM sucrose...was used during the whole culture period.” The second statement is found on p235 of von Arnold and states: “Various carbon sources were compared by culturing embryos on media supplemented with

sucrose, glucose, fructose, maltose, galactose, or xylose at 30mM.” The Examiner combines these statements to assert that the data displayed in Table 5 on page 239 of von Arnold shows a combination of sucrose and galactose for use in generation of embryogenic calli.

Applicant respectfully submits that Table 5 on page 239 of von Arnold clearly demonstrates an instance where the standard half strength basal medium containing 30mM sucrose was not used. In the Figure legend accompanying Table 5, the second sentence contradicts the Examiner’s interpretation of the data and states: “The embryos were cultured on full strength basal medium supplemented with various carbon sources at a final concentration of 30mM” (emphasis added). If 30mM galactose was added to media that already contained 30mM sucrose as asserted by the Examiner, then the final concentration of the various carbon sources in the media used in Table 5 would be 60mM rather than 30mM as reported in the Figure legend.

The contention that Table 5 shows a combination of 30mM sucrose in combination with 30mM of the additional carbon source indicated in the Table (i.e., galactose) also does not fit the data shown in Tables 4 and 5. Table 4 (left side) shows the effect of increasing the sucrose concentration on the percentage of embryogenic calli produced. In medium containing 30mM sucrose, 25% formation of embryogenic calli was observed. In medium containing 60mM sucrose the formation of embryogenic calli dropped to 8%. The difference between these numbers was significant as indicated by the different superscripts in Table 4 with a p value of less than 0.01. In Table 5, the first line shows the percentage of embryogenic calli formation on sucrose to be 24%. If the total concentration of sucrose in Table 5 is 60mM, as argued by the Examiner, the data shown in Tables 4 and 5 are not consistent (i.e., 24% embryogenic calli formation reported in Table 5 is not equivalent to 8% formation observed on 60mM sucrose in

Table 4, but is consistent with 25% formation observed on 30mM sucrose in Table 4). On the other hand, if the data shown in Table 5 is a result of culture on 30mM of the indicated carbon source alone, as the Applicant contends, then the data shown in Tables 4 and 5 are consistent.

Therefore, Applicant respectfully asserts that Table 5 does not teach or suggest using a combination of a galactose-containing sugar and an additional sugar for formation of embryogenic callus. Applicant respectfully submits that Von Arnold does not anticipate claims 1, 23, 43 or any claim dependent therefrom and the rejection should be withdrawn.

Rejections under 35 U.S.C. §103(a)

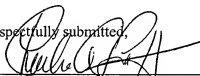
Claims 1, 4-8, 12, 14, 16-22, and 43-44 were rejected as obvious over von Arnold in view of Schuller et al., and Find. Claims 1, 4-9, 12, 16-23, 26-29, 32, and 36-45 were rejected as obvious over von Arnold in view of Vuke et al. Claims 1, 5-12, 14, 16-23, 27-34, and 36-43 were rejected as obvious over von Arnold in view of Uddin. None of the references teach or suggest use of a medium comprising a galactose-containing sugar in combination with an additional sugar for reproducing coniferous embryos. Therefore, none of the combinations of references supplements the defect in von Arnold and the rejections should be withdrawn.

Accordingly, Applicant respectfully requests withdrawal of the rejections and allowance of the claims. No fee is believed to be due in connection with this response. However, if an additional fee is owed, please charge such fee to Deposit Account No. 50-1965.

Date: _____

2/6/07

Respectfully submitted,



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